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# MOSBY'S MEDICAL, NURSING, & ALLIED HEALTH **DICTIONARY**

医学·护理·健康大词典

第6版





🚇 北京大学医学出版社

# MEDICAL, NURSING, & ALLIED HEALTH DICTIONARY

## SIXTH EDITION

Illustrated in full color throughout With Over 2200 Illustrations

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# **DEDICATION**

This edition is dedicated to Kenneth N. Anderson (1921-2001), a fine lexicographer and an extraordinary individual.

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# **PUBLISHER'S FOREWORD**

Medical and biological science and technology are advancing at a staggering rate. The language of health care and science evolves constantly to keep pace with these changes. To master the body of knowledge essential to their professional practice and to communicate effectively with their colleagues in various disciplines, health professionals must have access to the language of this vast and vital field.

Mosby's Medical, Nursing, & Allied Health Dictionary was developed to provide a single source of authoritative, upto-date information concerning health and health care terminology. Now in its sixth edition, Mosby's Dictionary has been praised by educators, students, and practitioners for its clarity, comprehensiveness, reliability, currency, and acclaimed illustrations. The hallmarks of our dictionary include the use of a large, easy-to-read typeface; encyclopedic definitions for many key terms; comprehensive entries for numerous drugs; commonsense, strictly alphabetical organization; the detailed Color Atlas of Human Anatomy; and the wealth of useful reference information provided in the appendixes. To assist our readers in recognizing alternate spellings, selected British spellings are included where appropriate.

One of *Mosby's Dictionary's* most distinctive features is the inclusion of more than 2200 high-quality full-color illustrations and photographs throughout the dictionary to enhance and clarify definitions of terms that cannot be adequately explained by words alone. *Mosby's Dictionary* was the first English-language medical, nursing, or allied health dictionary to use full color to show anatomy, disorders, and essential equipment throughout the dictionary, giving new meaning to the adage "one picture is worth a thousand words." For the sixth edition over 1200 figures have been added or updated. A list of the illustrations appears on p. xi. In addition, the 43-page Color Atlas of Human Anatomy has been updated with numerous full-color illustrations and is placed in the front of the dictionary for easy access.

To reflect new developments in many different facets of health care, approximately 3000 entirely new entries have been added to the sixth edition. Furthermore, all new and existing entries were thoroughly reviewed by experts to reflect current knowledge and practice. More than 10,000 definitions have been revised based on our consultants' recommendations. Our consultant board of over 100 individuals represents not only diverse specialties and disciplines but also Canadian and international interests. We are indebted to our consultants for their invaluable advice and assistance in the selection of new entries, as well as for the revision and refinement of definitions.

A total of 70 new and updated tables appear throughout the dictionary to provide key reference information to supplement the definitions. A list of boxes and tables is included on p. xxii to facilitate quick reference.

The appendixes offer an extensive compendium of useful reference information. Appendixes include information on normal laboratory values for adults and children, units of measurement, complete anatomy tables, common drug interactions, assessment guides, nutrition guidelines, directories of key health organizations, Spanish and French translations for commonly used vocabulary, immunizations, infection control, diagnosis-related groups, and the latest NANDA-approved nursing diagnoses, including an extensive listing of

nursing diagnoses related to numerous diseases, disorders, and procedures. All appendixes have been updated to include the latest information.

Appendixes new to this edition include contemporary and alternative medicine, herbs and natural supplements, herb-laboratory test interferences, American Sign Language guidelines, and key information for three important nursing taxonomies: the Nursing Interventions Classification, the Nursing Outcomes Classification, and the Omaha Classification System. The lists of resources and organizations have been extensively updated and expanded. The appendixes alone make Mosby's Dictionary an indispensable resource for students and professionals in the health sciences.

In addition to the many printed resources available in Mosby's Dictionary, we have provided a unique website on Mosby's Electronic Resource Links & Information Network (MERLIN). This website provides hundreds of links to key medical, nursing, and allied health organizations; answers to frequently asked questions; current contact information; and much more. The MERLIN website is updated regularly.

All the virtues of the first five editions of Mosby's Dictionary have been retained. Word roots and pronunciations are provided for principle entries to assist in learning and using vocabulary. Among the entries on diseases, drugs and procedures, over 1000 include practical information presented under separate headings such as Methods, Adverse Effects, Nursing Considerations, and Outcome Criteria. The rationales for all procedures is given due attention. Headings for Defining Characteristics, Risk Factors, and Related Factors have been added to the entries for nursing diagnoses to assist the reader to quickly locate this information. The inclusion of numerous prefixes and suffixes gives the reader additional access not only to the meanings of defined terms but also to terms that are not included in this dictionary and that, to a large extent, are not found in other reference works. The myriad cross-references from definition to definition are well chosen and contribute to the dictionary's encyclopedic dimensions. As with the prior editions, Mosby's Dictionary continues to serve nursing and allied health students and professionals as the most comprehensive, authoritative, and up-to-date dictionary available.

It is impossible to acknowledge specifically the many individuals who have contributed to the sixth edition of Mosby's Dictionary. However, we would like to thank our board of consultants who graciously gave of their time and expertise, helping ensure that the new edition of our dictionary would be a comprehensive, reliable, up-to-date resource for students and professionals in the health sciences. We are especially grateful to the many Mosby, WB Saunders, Churchill Livingstone, Wolfe, and Gower authors and artists whose photographs and line drawings appear in this new edition of our dictionary. We also gratefully acknowledge the extensive contributions made by Ken and Lois Anderson and Walter Glanze to the first five editions of Mosby's Dictionary. Their knowledge, dedication, professionalism, and commitment to quality were critical to the success of our dictionary. These people and many others played important roles in the development and publication of our new edition. We appreciate their contributions and trust that they will be proud to be associated with the sixth edition of Mosby's Medical, Nursing, & Allied Health Dictionary.

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# **GUIDE TO THE DICTIONARY**

#### A. ALPHABETIC ORDER

The entries are alphabetized in dictionary style, that is, letter by letter, disregarding spaces or hyphens between words:

analgesic anal membrane analog artificial lung artificially acquired immunity artificial pacemaker

(Alphabetized in telephone-book style, that is, word by word, the order would be different: anal membrane / analgesic / analog; artificial lung / artificial pacemaker / artificially acquired immunity.)

The alphabetization is alphanumeric; that is, words and numbers form a single list, numbers being positioned as though they were spelled-out numerals: Nilstat/90-90 traction/ninth nerve. (An example of the few exceptions to this rule is the sequence 17-hydroxycorticosteroid / 11-hydroxyetiocholanolone / 5-hydroxyindoleacetic acid, which can be found between the entries hydroxochloroquine sulfate and hydroxyl, not, as may be expected, 17-. . . in letter "F."). Small subscript and superscript numbers are disregarded in alphabetizing: No / N<sub>2</sub>O / nobelium

For the alphabetization of prefixes and suffixes, see F.

#### B. COMPOUND HEADWORDS

Compound headwords are given in their natural word order: abdominal surgery, not surgery, abdominal; achondroplastic dwarf, not dwarf, achondroplastic.

When appropriate, a reference is made elsewhere to the nonal-phabetized element; the entry **dwarf**, for example, shows this indirect cross-reference: ". . . Kinds of dwarfs include **achondroplastic dwarf**. . . ." (followed by additional terms ending in "dwarf").

There are few exceptions to this natural word order; nearly all of these concern formal classifications, for example: "coping, commonity, ineffective, a nursing diagnosis accepted by the Eleventh National Conference on the Classification of Nursing Diagnoses..."

(NOTE: In this guide, the term "headword" is used to refer to any alphabetized and nonindented definiendum, be it a single-word term or a compound term.)

#### C. MULTIPLE DEFINITIONS

If a headword has more than one meaning, the meanings are numbered and are often accompanied by an indication of the field in which a sense applies: "fractionation, 1. (in neurology) . . . 2. (in chemistry) . . . 3. (in bacteriology) . . . 4. (in histology) . . . 5. (in radiology) . . . "

Smaller differences in meaning are occasionally separated by semicolons: "enervation, 1. the reduction or lack of nervous energy; weakness; lassitude, languor. 2. removal of a complete nerve or of a section of nerve."

Words that are spelled alike but have entirely different meanings and origins are usually given as separate entries, with superscript numbers: "aural,", of or pertaining to the ear or hearing . . ." followed by "aural," of or pertaining to an aura."

For reference entries that appear in the form of numbered senses, see the example of **hyperalimentation** at E.

#### D. THE BOLDFACE ELEMENTS OF AN ENTRY

After the entry headword, which has large boldface type, the following elements may occur in boldface, in this order.

In boldface:

■ HEADWORD ABBREVIATIONS: central nervous system (CNS)

A corresponding abbreviation entry is listed: "CNS, abbreviation for central nervous system." (For abbreviation entries, see F.)

Occasionally the order is reversed: "DDT (dichlordiphenyltrichloroethane)," with a corresponding reference entry: "dichlordiphenyltrichloroethane. See DDT." (For reference entries, see E below.)

■ PLURAL OR SINGULAR FORMS that are not obvious. The first form shown is the more common except when plurals are of more or less equal frequency: "carcinoma, pl. carcinomas, carcinomata"; "cortex, pl. cortices"; "data, sing. datum"

A reference entry is listed only when the terms are alphabetically separated; for example, there are several entries between **data** and "datum. See data."

■ HIDDEN ENTRIES, that is, terms that can best be defined in the context of a more general entry. For example, the definition of the entry equine encephalitis continues as follows: ". . . Eastern equine encephalitis (EEE) is a severe form of the infection . . . western equine encephalitis (WEE), which occurs . . . Venezuelan equine encephalitis (VEE), which is common in . . ."

The corresponding reference entries are "eastern equine encephalitis. See equine encephalitis."; "western equine encephalitis. See equine . . ."; and so forth. For further reference, from the abbreviations EEE, WEE, and VEE, see F.

■ INDIRECT CROSS-REFERENCES to other defined entries, shown as part of the definition and usually introduced by "Kinds of": "dwarf, . . . Kinds of dwarfs include achondroplastic dwarf, asexual dwarf, . . . , and thanatophoric dwarf."

The entry referred to may or may not show a reciprocal reference, depending on the information value.

■ SYNONYMOUS TERMS, preceded by "Also called," "Also spelled," or, for verbs and adjectives, "Also": "abducens nerve, . . . Also called sixth nerve."

A corresponding reference entry is usually given: "sixth nerve. See abducens nerve."

Occasionally the synonymous term is accompanied by a usage label: "abdomen, . . . Also called (informal) belly."

If a synonymous term applies to only one numbered sense, it precedes rather than follows the definition, to avoid ambiguity: "algology, 1. the branch of medicine that is concerned with the study of pain. 2. also called **phycology**, the branch of science that is concerned with algae." (Whenever a synonymous term *follows* the last numbered sense, it applies to all senses of the entry.)

■ (DIRECT) CROSS-REFERENCES, preceded by "See also" or "Compare," referring to another defined entry for additional information: "abdominal aorta, . . . See also descending aorta."

The cross-reference may or may not be reciprocal.

Cross-references are also made to illustrations, to tables, to the color atlas, and to the appendixes.

For cross-references from an abbreviation entry (with "See"), see F.

■ PARTS OF SPEECH related to the entry headword, shown as run-on entries that do not require a separate definition: "abalienation, . . . —abalienate, v., abalienated, adj."

#### E. REFERENCE ENTRIES

Reference entries are undefined entries referring to a defined entry. There, they usually correspond to the boldface terms for which reference entries are mentioned at D above.

However, many of the less frequently used synonymous terms are listed as a reference only; at the entry referred to, the reader's attention is not drawn to them with "Also called."

A reference entry may also refer to a defined entry for other reasons: A particular lightface term in the definition is occasionally referred to: "motion sickness, . . . air sickness . . ."—with the reference entry "air sickness: See motion sickness."

Some reference entries appear in the form of a numbered sense of a defined entry: "hyperalimentation, 1. overfeeding or the . . . in

excess of the demands of the appetite. 2. See total parenteral nutrition." The latter entry says "Also called hyperalimentation."

If two or more alphabetically adjacent terms refer to the same entry or entries, they are styled as one reference entry: "coxa adducta, coxa flexa. See coxa vara."

A reference entry that would be derived from a boldface term in an immediately adjacent entry is not listed again as a headword; it becomes a "hidden reference entry": "acardius amorphus, . . . Also called acardius anceps." But acardius anceps is not listed again as a reference entry because it would immediately follow the entry, the next entry being acariasis. Likewise: "acoustic neuroma, . . . Also called acoustic neurilemmoma, acoustic neurofibroma." But the three synonymous terms are not listed again as reference entries because they would immediately precede the entry, the entry ahead being acoustic nerve. Therefore:

If a term is not listed at the expected place, the reader might find it among the boldface terms of the immediately preceding or the immediately following entry.

Selected British spellings are included where appropriate. These are included as reference entries which refer the reader to the American spelling containing the definition. After the definition, the British spelling is given as an alternate spelling. For example: "haematology." See hematology." The end of the definition for hematology says "Also spelled haematology." As with other reference entries, when the reference entry would immediately precede or follow the main entry, it is not included as a separate entry, such as "hyperkalemia... Also spelled hyperkalaemia."

#### F. OTHER KINDS OF ENTRIES

■ ABBREVIATION ENTRIES: Most abbreviation entries, including symbol entries, show the full form of the term in boldface: "ABC, abbreviation for aspiration biopsy cytology." "H, symbol for the element hydrogen." Implied reference is made to the entries aspiration biopsy cytology and hydrogen respectively.

Abbreviation entries for which there is no corresponding entry show the full form in italics: "CBF, abbreviation for *cerebral blood flow*." "f, symbol for *respiratory frequency*."

A combination of abbreviation entry and reference entry occurs when the abbreviation is that of a boldface or lightface term appearing under another headword. For example, the hidden entries at D (in addition to the reference entries shown there) are also referred to in the following manner: "EEE, abbreviation for eastern equine encephalitis. See equine encephalitis." An example with a lightface term: "HLA-A, abbreviation for human leukocyte antigen A. See human leukocyte antigen." The latter entry says ". . They are HLA-A, HLA-B, HLA-C . . ."

■ PREFIXES AND SUFFIXES: The large amount and the nature of prefix and suffix entries are an important feature of this dictionary. Through these entries the reader has additional access to the meanings of headwords and the words used in defining them. But such entries also give access to thousands of terms that are not included in this dictionary (and, to a large extent, are not found in any other reference work). For example, the entries xylo- and -phage (plus -phagia, phago-, and -phagy) may lead to the meaning of "xylophagous," namely, "wood-eating."

Prefix and suffix headwords consisting of variants are alphabetized by the first variant only. For example, "epi-, ep-, a prefix meaning 'on, upon' . . ." is followed by epiblast (notwithstanding "ep-"). The other variant or variants are listed in their own alphabetical place as reference entries referring to the first variant: "ep-. See epi-."

■ ENTRIES WITH SPECIAL PARAGRAPHS: Among the entries on diseases, drugs, and procedures, at least 1000 feature special paragraphs, with headings such as:

observations, intervention, and nursing considerations. (for disease entries).

indications, contraindications, and "adverse effects." (for drug entries).

"method," "nursing interventions," and "outcome criteria." (for procedure entries).

#### G. FURTHER COMMENTS

- EPONYMOUS TERMS THAT END IN "SYNDROME" OR "DISEASE" are given with an apostrophe (and "s" where appropriate) if they are based on the name of one person: Adie's syndrome; Symmers' disease; Treacher Collins' syndrome (the ophthalmologist Edward Treacher Collins). If they are based on the names of several people, they are without apostrophe: Bernard-Soulier syndrome; Brill-Symmers disease.
- ABBREVIATIONS AND LABELS IN ITALIC TYPE: The abbreviations are pl. (plural), npl. (noun plural), sing. (singular); n. (noun), adj. (adjective), v. (verb). The recurring labels are slang, informal, nontechnical, obsolete, archaic; chiefly British, Canada, U.S.
- DICTIONARY OF FIRST REFERENCE for general spelling preferences is Webster's New Collegiate Dictionary; thereafter: Webster's Third New International Dictionary.

#### H. PRONUNCIATION

- SYSTEM: See the Pronunciation Key on p. xxvi. The pronunciation system of this dictionary is basically a system that most readers know from their use of popular English dictionaries, especially the major college or desk dictionaries. All symbols for English sounds are ordinary letters of the alphabet with few adaptations, and with the exception of the schwa, /ə/ (the neutral vowel).
- ACCENTS: Pronunciation, given between slants, is shown with primary and secondary accents, and a raised dot shows that two vowels or, occasionally, two consonants, between the slants are pronounced separately:

```
anoopsia /an'ō·op'sē·ə/
cecoileostomy /sē'kō·il'ē·os'təmē/
methemoglobin /met'hēməglō'bin, met·hē'məglōbin/
```

Without the raised dot, the second /th/ in the last example would be pronounced as in "thin." (The pronunciation key lists the following paired consonant symbols as representing a single sound: /ch/, /ng/, /sh/, /th/, /th/, /zh/, and the foreign sounds /kh/ and /kh/—if no raised dot intervenes.)

■ TRUNCATION: Pronunciation may be given in truncated form, especially for alternative or derived words:

```
defibrillate /diff'brilāt, difib'-/
bacteriophage /baktir'ē·əfāj', . . .--bacteriophagy /-of'əjē/, n.
```

In the last example, the reader is asked to make the commonsense assumption that the primary accent of the headword becomes a secondary accent in the run-on term: /baktir'ē·of'əjē/.

■ LOCATION: Pronunciation may be given for any boldface term and may occur anywhere in an entry:

```
aura /ôr'ə/, 1. pl. aurae /ôr'ē/, a sensation . . . 2. pl. auras, an emanation of light . . .
```

micrometer, 1. /mīkrom'ətər/, an instrument used for . . . 2. /mī'krōmē'tər/, a unit of measurement . . .

Occasionally it is given for a lightface term:

b.i.d., (in prescriptions) abbreviation for bis in die /dē'ā/, a Latin phrase meaning . . .

**boutonneuse fever**..., an infectious disease...a tache noire /täshnô·är'/ or black spot...

■ LETTERWORD VERSUS ACRONYM: Letterwords are abbreviations that are pronounced by sounding the names of each letter, whereas acronyms are pronounced as words. If the pronunciation of an abbreviation is not given, the abbreviation is usually a letterword:

ABO blood groups [read /ā'bē'ō'/, not /ā'bō/]

If the pronunciation is an acronym, this is indicated by pronunciation:

AWOL /ā'wôl/

Some abbreviations are used as both:

JAMA /jä'mä, jam'ə, jā'ā'em'ā'/

■ FOREIGN SOUNDS: Non-English sounds do not occur often in this dictionary. They are represented by the following symbols:

/œ/ as in (French) feu /fœ/, Europe /œrôp'/; (German) schön /shœn/, Goethe /gœ'tə/

/Y/ as in (French) tu /tY/, déjà vu /dāzhävY'/; (German) grün /grYn/, Walküre /vulkY'rə/

/kh/ as in (Scottish) loch /lokh/; (German) Rorschach /rôr'-shokh/, Bach /bokh, bäkh/

/kh/ as in (German) ich /ikh/, Reich /rīkh/ (or, approximated, as in English fish: /ish/, /rīsh/)

/N/ This symbol does not represent a sound but indicates that the preceding vowel is a nasal, as in French bon /bôN/, en face /äNfäs'/, or international /aNternäsyönäl'/.

/nyə/ Occurring at the end of French words, this symbol is not truly a separate syllable but an /n/ with a slight /y/ (similar to the sound in "onion") plus a near-silent /ə/, as in **Bois de Boulogne** /boolo'nyə/, **Malgaigne** /mälgā'nyə/.

Because this work is a subject dictionary rather than a language dictionary, certain foreign words and proper names are rendered by English approximations. Examples are Müller /mil'ər/ (which is closer to German than /mY'lər/), Niemann /nē'mon/ (which is close than /nē'män/), Friedreich /frēd'rīsh/ (which is close enough for anyone not used to pronouncing /kh/), or jamais vu, for which three acceptable pronunciations are given: /zhämāvY'/ (near-French) and the approximations /zhämāvē'/ and /zhämāvōo'/ (/-vē'/ being much closer to French than /-vōo'/). Depending on usage, a foreign word or name may be given with near-native pronunciation, with entirely assimilated English pronunciation (as de Quervain's fracture /dəkərvānz'/), or with both (as Dupuytren's contracture /dyPyi-traNs', dēpē-itranz'/ or Klippel-Feil syndrome /klipel'fel', klip'-əlfīl'/).

At any rate, the English speaker should not hesitate to follow whatever is usage in his or her working or social environment.

Many of the numerous *Latin* terms in this dictionary are not given with pronunciation, mainly because there are different ways (all of them understood) in which *Latin* is pronounced by the English speaker and may be pronounced by speakers elsewhere. However, guidance is given in many cases, often to reflect common usage.

■ LATIN AND GREEK PLURALS: The spelling of Latin and Greek plurals is shown in most instances. However, when the plural formation is regular according to Latin and Greek rules, the pronunciation is usually not included. Therefore, the following list shows the suggested pronunciation of selected plural endings that are frequently encountered in the field of medicine:

PLURAL ENDINGS	EXAMPLES
-a /-ə/	inoculum, pl. inocula /inok'y oolə/
-ae /-ē/	vertebra, pl. vertebrae /vur'təbrē/
-ces /-sez/	thorax, pl. thoraces /thôr'əsēz/
	apex, pl. apices /ā'pisēz/
-era /-ərə/	genus, pl. genera /jen/ərə/
-ges /-jēz/	meninx, pl. meninges /minin'jēz/
-i /-ī/	calculus, pl. calculi /kal'kyəlī/
	coccus, pl. cocci /kok'sī/

PLURAL	
ENDINGS	EXAMPLES
-ia /-ē·ə/	criterion, pl. criteria /krītir'ē·ə/
-ides /-idēz/	epulis, pl. epulides /ipyoo'lidez/
-ina /-ənə/	foramen, pl. foramina /fəram'ənə/
-ines /-ənēz/	lentigo, pl. lentigines /lentij'ənēz/
-omata /-ō'mətə/	hemotoma, pl. hematomata
	/hē'mətō'mətə/
-ones /-ō'nēz/	comedo, pl. comedones
	/kom'ədō'nēz/
-ora /-ərə/	corpus, pl. corpora /kôr'pərə/
	femur, pl. femora /fem'ərə/
-ses /-sēz/	analysis, pl. analyses /ənal'əsēz/
<b>-udes</b> /-oo'dēz/	incus, pl. incudes /inkoo'dez/
-us /-oos/	ductus (/duk'təs/), pl. ductus
	/duk'toos/

NOTE: Notwithstanding the listing of Latin and Greek plurals in this dictionary, and notwithstanding the foregoing examples, in most instances it is acceptable or even preferable to pluralize Latin and Greek words according to the rules of English words. (For certain kinds of entries, both the English and the foreign plurals are given in this dictionary, usually showing the English form first, as, for example, in nearly all -oma nouns: hematoma, pl. hematomas, hematomata.)

W.D.G.

#### I. ETYMOLOGIES AND EPONYMS

The word roots, or etymologies, of the headwords in this dictionary are shown in square brackets following the pronounciations of the headwords. Meanings are given in roman typeface and represent the original connotation of the word from which the medical term is derived. In compound medical terms formed from two or more elements, a plus sign (+) is used to indicate an element has been translated in a previous headword, as in [L acidus + Gk philein to love]. A semicolon (;) is used to separate word elements having more than one origin, as in [L abdomen; Gk skopein to view]. Word fragments representing etymologic elements, such as prefixes, are separated from the rest of the word root by a comma (,), as in [Gk a, basis not step]. A comma is also used to separate the abbreviation for the language of origin and its translation when the English-language equivalent for the word is the same, as in the term ala [L, wing].

The following abbreviations are used to identify language sources:

Afr	African	Jpn	Japanese
Ar	Arabic	L	Latin
AS	Anglo-Saxon	ME	Middle English
Dan	Danish	OFr	Old French
D	Dutch	ONorse	Old Norse
Fr	French	Port	Portuguese
Ger	German	Scand	Scandinavian
Gk	Greek	Sp	Spanish
Heb	Hebrew	Swe	Swedish
It	Italian	Turk	Turkish

Some other languages sources, such as Singhalese or Welsh, may be indicated without abbreviations.

Eponymous entries, in which the surname of an individual is incorporated in the headword, are also treated in square brackets with brief biographic details, as in **Alcock's canal** [Benjamin Irish anatomist, b. 1801]. When an eponym contains two or more surnames, a semicolon (;) is used to separate the identities of the individuals. Medical terms derived from other proper nouns, such as geographic sites, are presented in a similar manner, as **calabar swelling** [Calabar, a Nigerian seaport], or **ytterbium** (**Yb**) [Ytterby, Sweden].

K.N.A.

# **PRONUNCIATION KEY**

Vowels		Consonants	
SYMBOLS	KEY WORDS	SYMBOLS	KEY WORDS
/a/	hat	/b/	<b>b</b> ook
/ä/	f <b>a</b> ther	/ch/	chew
/ā/	fate	/d/	<b>d</b> ay
/e/	fl <b>e</b> sh	/f/	fast
/ē/	she	/g/	good
/er/	air, ferry	/h/	happy
/i/	sit	/j/	<b>g</b> em
/ī/	eye	/k/	keep
/ir/	ear	/\/	late
/o/	proper	/m/	make
/ō/	nose	/n/	<b>n</b> o
/ô/	saw	/ng/	si <b>ng</b> , dr <b>in</b> k
/oi/	b <b>oy</b>	/ng·g/	fi <b>ng</b> er
/ <del>oo</del> /	m <b>o</b> ve	/p/	<b>p</b> air
/ŏŏ/	book	/r/	<b>r</b> ing
/ou/	out	/s/	set
/u/	cup, love	/sh/	shoe, lotion
/ur/	fur, first	/t/	tone
/ə/	(the neutral vowel,	/th/	thin
	always unstressed,	/th/	<b>th</b> an
	as in) ago, focus	/v/	very
/ər/	teacher, doctor	/w/	work
		/y/	yes
		/z/	zeal
		/zh/	azure, vision

For /œ/, /Y/, /kh/, /kh/, /N/, and /nyə/, see FOREIGN SOUNDS, p. xxv.

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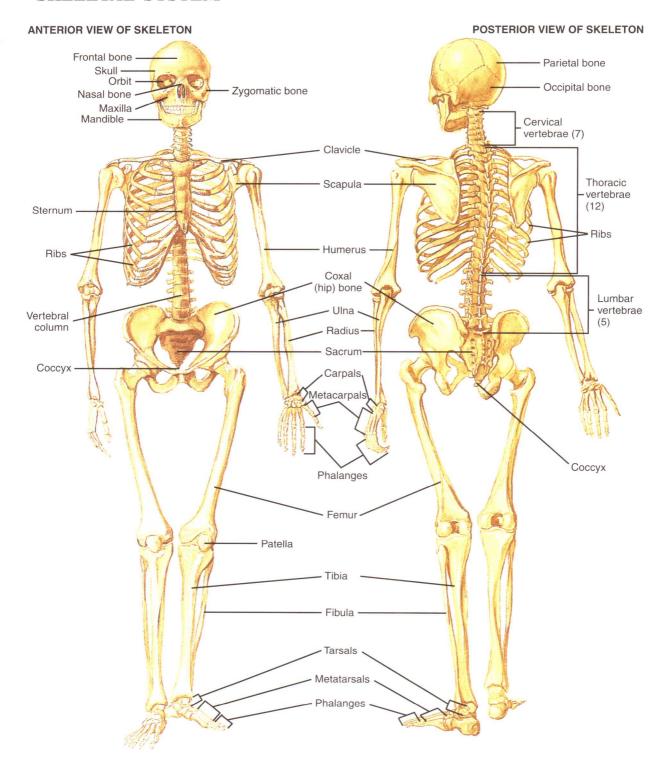
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